RAW SEQUENCE LISTING

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Application Serial Number: _09/873,403 B_

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RAW SEQUENCE LISTING   DATE: 08/17/2006
PATENT APPLICATION: US/09/873,403B   TIME: 09:42:39

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 3 <110> APPLICANT: Srivastava, Pramod
 5 <120> TITLE OF INVENTION: COMPLEXES OF ALPHA (2) MACROGLOBULIN AND ANTIGENIC
 6       MOLECULES FOR IMMUNOTHERAPY
 8 <130> FILE REFERENCE: 8449-178-999
10 <140> CURRENT APPLICATION NUMBER: 09/873,403B
11 <141> CURRENT FILING DATE: 2001-06-04
13 <150> PRIOR APPLICATION NUMBER: 09/625,139
14 <151> PRIOR FILING DATE: 2000-07-25
16 <150> PRIOR APPLICATION NUMBER: 60/209,266
17 <151> PRIOR FILING DATE: 2000-06-02
19 <160> NUMBER OF SEQ ID NOS: 12
21 <170> SOFTWARE: PatentIn version 3.2
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 14849
25 <212> TYPE: DNA
26 <213> ORGANISM: Mus sp.
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29 <221> NAME/KEY: CDS
30 <222> LOCATION: (442)..(14079)
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37 caattgtgca tttttgcagc cggagtcggc tccgagatgg ggctgtgagc ttcgccctgg     180
39 gaggggggaga ggagcgagga gtaaagcagg ggtgaagggt tcgaatttgg gggcagggggg   240
41 cgcacccgcg tcagcaggcc cttcccaggg ggctcggaac tgtaccattt cacctatgcc     300
43 cctggttcgc tttgcttaag gaaggataag atagaagagt cggggagagg aagataaagg     360
45 gggacccccc aattgggggg ggcgaggaca agaagtaaca ggaccagagg gtggggggctg    420
47 ctgtttgcat cggcccacac c atg ctg acc ccg ccg ttg ctg ctg ctc gtg      471
48                         Met Leu Thr Pro Pro Leu Leu Leu Leu Val
49                         1               5                   10
51 ccg ctg ctt tca gct ctg gtc tcc ggg gcc act atg gat gcc cct aaa      519
52 Pro Leu Leu Ser Ala Leu Val Ser Gly Ala Thr Met Asp Ala Pro Lys
53             15                  20                  25
55 act tgc agc cct aag cag ttt gcc tgc aga gac caa atc acc tgt atc      567
56 Thr Cys Ser Pro Lys Gln Phe Ala Cys Arg Asp Gln Ile Thr Cys Ile
57             30                  35                  40
59 tca aag ggc tgg cgg tgt gac ggt gaa aga gat tgc ccc gac ggc tct      615
60 Ser Lys Gly Trp Arg Cys Asp Gly Glu Arg Asp Cys Pro Asp Gly Ser
61             45                  50                  55
63 gat gaa gcc cct gag atc tgt cca cag agt aaa gcc cag aga tgc ccg      663
64 Asp Glu Ala Pro Glu Ile Cys Pro Gln Ser Lys Ala Gln Arg Cys Pro
65       60                  65                  70
67 cca aat gag cac agt tgt ctg ggg act gag cta tgt gtc ccc atg tct      711
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68 Pro Asn Glu His Ser Cys Leu Gly Thr Glu Leu Cys Val Pro Met Ser
69 75              80                  85              90
71 cgt ctc tgc aac ggg atc cag gac tgc atg gat ggc tca gac gag ggt    759
72 Arg Leu Cys Asn Gly Ile Gln Asp Cys Met Asp Gly Ser Asp Glu Gly
73              95                  100             105
75 gct cac tgc cga gag ctc cga gcc aac tgt tct cga atg ggt tgt caa    807
76 Ala His Cys Arg Glu Leu Arg Ala Asn Cys Ser Arg Met Gly Cys Gln
77              110                 115             120
79 cac cat tgt gta cct aca ccc agt ggg ccc acg tgc tac tgt aac agc    855
80 His His Cys Val Pro Thr Pro Ser Gly Pro Thr Cys Tyr Cys Asn Ser
81              125                 130             135
83 agc ttc cag ctc gag gca gat ggc aag acg tgc aaa gat ttt gac gag    903
84 Ser Phe Gln Leu Glu Ala Asp Gly Lys Thr Cys Lys Asp Phe Asp Glu
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87 tgt tcc gtg tat ggc acc tgc agc cag ctt tgc acc aac aca gat ggc    951
88 Cys Ser Val Tyr Gly Thr Cys Ser Gln Leu Cys Thr Asn Thr Asp Gly
89 155             160                 165             170
91 tcc ttc aca tgt ggc tgt gtt gaa ggc tac ctg ctg caa ccg gac aac    999
92 Ser Phe Thr Cys Gly Cys Val Glu Gly Tyr Leu Leu Gln Pro Asp Asn
93              175                 180             185
95 cgc tcc tgc aag gcc aag aat gag cca gta gat cgg ccg cca gtg cta    1047
96 Arg Ser Cys Lys Ala Lys Asn Glu Pro Val Asp Arg Pro Pro Val Leu
97              190                 195             200
99 ctg att gcc aac tct cag aac atc cta gct acg tac ctg agt ggg gcc    1095
100 Leu Ile Ala Asn Ser Gln Asn Ile Leu Ala Thr Tyr Leu Ser Gly Ala
101             205                 210             215
103 caa gtg tct acc atc aca ccc acc agc acc cga caa acc acg gcc atg   1143
104 Gln Val Ser Thr Ile Thr Pro Thr Ser Thr Arg Gln Thr Thr Ala Met
105      220             225                 230
107 gac ttc agt tat gcc aat gag acc gta tgc tgg gtg cac gtt ggg gac   1191
108 Asp Phe Ser Tyr Ala Asn Glu Thr Val Cys Trp Val His Val Gly Asp
109 235             240                 245             250
111 agt gct gcc cag aca cag ctc aag tgt gcc cgg atg cct ggc ctg aag   1239
112 Ser Ala Ala Gln Thr Gln Leu Lys Cys Ala Arg Met Pro Gly Leu Lys
113             255                 260             265
115 ggc ttt gtg gat gag cat acc atc aac atc tcc ctc agc ctg cac cac   1287
116 Gly Phe Val Asp Glu His Thr Ile Asn Ile Ser Leu Ser Leu His His
117             270                 275             280
119 gtg gag cag atg gca atc gac tgg ctg acg gga aac ttc tac ttt gtc   1335
120 Val Glu Gln Met Ala Ile Asp Trp Leu Thr Gly Asn Phe Tyr Phe Val
121      285             290                 295
123 gac gac att gac gac agg atc ttt gtc tgt aac cga aac ggg gac acc   1383
124 Asp Asp Ile Asp Asp Arg Ile Phe Val Cys Asn Arg Asn Gly Asp Thr
125      300             305                 310
127 tgt gtc act ctg ctg gac ctg gaa ctc tac aac ccc aaa ggc atc gcc   1431
128 Cys Val Thr Leu Leu Asp Leu Glu Leu Tyr Asn Pro Lys Gly Ile Ala
129 315             320                 325             330
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132 Leu Asp Pro Ala Met Gly Lys Val Phe Phe Thr Asp Tyr Gly Gln Ile
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139 gtg gat agc aag atc gtg ttt cca cac ggc atc acc ctg gac ctg gtc     1575
140 Val Asp Ser Lys Ile Val Phe Pro His Gly Ile Thr Leu Asp Leu Val
141          365                  370                  375
143 agc cgc ctc gtc tac tgg gcg gac gcc tac cta gac tac atc gag gtg     1623
144 Ser Arg Leu Val Tyr Trp Ala Asp Ala Tyr Leu Asp Tyr Ile Glu Val
145      380                  385                  390
147 gta gac tac gaa ggg aag ggt cgg cag acc atc atc caa ggc atc ctg     1671
148 Val Asp Tyr Glu Gly Lys Gly Arg Gln Thr Ile Ile Gln Gly Ile Leu
149 395              400                  405                  410
151 atc gag cac ctg tac ggc ctg acc gtg ttt gag aac tat ctc tac gcc     1719
152 Ile Glu His Leu Tyr Gly Leu Thr Val Phe Glu Asn Tyr Leu Tyr Ala
153              415                  420                  425
155 acc aac tcg gac aat gcc aac acg cag cag aag acg agc gtg atc cga     1767
156 Thr Asn Ser Asp Asn Ala Asn Thr Gln Gln Lys Thr Ser Val Ile Arg
157          430                  435                  440
159 gtg aac cgg ttc aac agt act gag tac cag gtc gtc acc cgt gtg gac     1815
160 Val Asn Arg Phe Asn Ser Thr Glu Tyr Gln Val Val Thr Arg Val Asp
161      445                  450                  455
163 aag ggt ggt gcc ctg cat atc tac cac cag cga cgc cag ccc cga gtg     1863
164 Lys Gly Gly Ala Leu His Ile Tyr His Gln Arg Arg Gln Pro Arg Val
165      460                  465                  470
167 cgg agt cac gcc tgt gag aat gac cag tac ggg aag cca ggt ggc tgc     1911
168 Arg Ser His Ala Cys Glu Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys
169 475              480                  485                  490
171 tcc gac atc tgc ctc ctg gcc aac agt cac aag gca agg acc tgc agg     1959
172 Ser Asp Ile Cys Leu Leu Ala Asn Ser His Lys Ala Arg Thr Cys Arg
173              495                  500                  505
175 tgc agg tct ggc ttc agc ctg gga agt gat ggg aag tct tgt aag aaa     2007
176 Cys Arg Ser Gly Phe Ser Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys
177          510                  515                  520
179 cct gaa cat gag ctg ttc ctc gtg tat ggc aag ggc cga cca ggc atc     2055
180 Pro Glu His Glu Leu Phe Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile
181      525                  530                  535
183 att aga ggc atg gac atg ggg gcc aag gtc cca gat gag cac atg atc     2103
184 Ile Arg Gly Met Asp Met Gly Ala Lys Val Pro Asp Glu His Met Ile
185      540                  545                  550
187 ccc atc gag aac ctt atg aat cca cgc gct ctg gac ttc cac gcc gag     2151
188 Pro Ile Glu Asn Leu Met Asn Pro Arg Ala Leu Asp Phe His Ala Glu
189 555              560                  565                  570
191 acc ggc ttc atc tac ttt gct gac acc acc agc tac ctc att ggc cgc     2199
192 Thr Gly Phe Ile Tyr Phe Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg
193              575                  580                  585
195 cag aaa att gat ggc acg gag aga gag act atc ctg aag gat ggc atc     2247
196 Gln Lys Ile Asp Gly Thr Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile
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199 cac aat gtg gag ggc gta gcc gtg gac tgg atg gga gac aat ctt tac        2295
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203 tgg act gat gat ggc ccc aag aag acc att agt gtg gcc agg ctg gag        2343
204 Trp Thr Asp Asp Gly Pro Lys Lys Thr Ile Ser Val Ala Arg Leu Glu
205     620             625             630
207 aaa gcc gct cag acc cgg aag act cta att gag ggc aag atg aca cac        2391
208 Lys Ala Ala Gln Thr Arg Lys Thr Leu Ile Glu Gly Lys Met Thr His
209 635             640             645                 650
211 ccc agg gcc att gta gtg gat cca ctc aat ggg tgg atg tac tgg aca        2439
212 Pro Arg Ala Ile Val Val Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr
213             655             660             665
215 gac tgg gag gag gac ccc aag gac agt cgg cga ggg cgg ctc gag agg        2487
216 Asp Trp Glu Glu Asp Pro Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg
217         670             675             680
219 gct tgg atg gac ggc tca cac cga gat atc ttt gtc acc tcc aag aca        2535
220 Ala Trp Met Asp Gly Ser His Arg Asp Ile Phe Val Thr Ser Lys Thr
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223 gtg ctt tgg ccc aat ggg cta agc ctg gat atc cca gcc gga cgc ctc        2583
224 Val Leu Trp Pro Asn Gly Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu
225     700             705             710
227 tac tgg gtg gat gcc ttc tat gac cga att gag acc ata ctg ctc aat        2631
228 Tyr Trp Val Asp Ala Phe Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn
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231 ggc aca gac cgg aag att gta tat gag ggt cct gaa ctg aat cat gcc        2679
232 Gly Thr Asp Arg Lys Ile Val Tyr Glu Gly Pro Glu Leu Asn His Ala
233             735             740             745
235 ttc ggc ctg tgt cac cat ggc aac tac ctc ttt tgg acc gag tac cgg        2727
236 Phe Gly Leu Cys His His Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg
237         750             755             760
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240 Ser Gly Ser Val Tyr Arg Leu Glu Arg Gly Val Ala Gly Ala Pro Pro
241         765             770             775
243 act gtg acc ctt ctg cgc agc gag aga ccg cct atc ttt gag atc cga        2823
244 Thr Val Thr Leu Leu Arg Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg
245     780             785             790
247 atg tac gac gcg cac gag cag caa gtg ggt acc aac aaa tgc cgg gta        2871
248 Met Tyr Asp Ala His Glu Gln Gln Val Gly Thr Asn Lys Cys Arg Val
249 795             800             805                 810
251 aat aac gga ggc tgc agc agc ctg tgc ctc gcc acc ccc ggg agc cgc        2919
252 Asn Asn Gly Gly Cys Ser Ser Leu Cys Leu Ala Thr Pro Gly Ser Arg
253             815             820             825
255 cag tgt gcc tgt gcc gag gac cag gtg ttg gac aca gat ggt gtc acc        2967
256 Gln Cys Ala Cys Ala Glu Asp Gln Val Leu Asp Thr Asp Gly Val Thr
257             830             835             840
259 tgc ttg gcg aac cca tcc tac gtg ccc cca ccc cag tgc cag ccg ggc        3015
260 Cys Leu Ala Asn Pro Ser Tyr Val Pro Pro Pro Gln Cys Gln Pro Gly
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264 Gln Phe Ala Cys Ala Asn Asn Arg Cys Ile Gln Glu Arg Trp Lys Cys
265     860             865             870
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268 Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp Glu Ala Pro Ala Leu
269 875             880             885             890
271 tgc cat caa cac acc tgt ccc tcg gac cga ttc aag tgt gag aac aac    3159
272 Cys His Gln His Thr Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn
273             895             900             905
275 cgg tgt atc ccc aac cgc tgg ctc tgt gat ggg gat aat gat tgt ggc    3207
276 Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly
277             910             915             920
279 aac agc gag gac gaa tcc aat gcc acg tgc tca gcc cgc acc tgt cca    3255
280 Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro
281             925             930             935
283 ccc aac cag ttc tcc tgt gcc agt ggc cga tgc att cct atc tca tgg    3303
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293             975             980             985
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296 Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn Asp  Asn Asp
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300 Cys Gly Asp  Asn Ser Asp Glu Ala  Gly Cys Ser His Ser  Cys Ser
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316 Cys His Ser  Asp Glu Phe Gln Cys  Pro Leu Asp Gly Leu  Cys Ile
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320 Pro Leu Arg  Trp Arg Cys Asp Gly  Asp Thr Asp Cys Met  Asp Ser
321         1080            1085            1090
323 agc gat gag  aag agc tgt gag ggc  gtg acc cat gtt tgt  gac ccg     3762
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328 Asn Val Lys  Phe Gly Cys Lys Asp  Ser Ala Arg Cys Ile  Ser Lys
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